

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-003952**Date Inspected:** 28-Sep-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name:	Lvliqing and Wu Ming Cai	CWI Present:	Yes	No
Inspected CWI report:	Yes No N/A	Rod Oven in Use:	Yes	No N/A
Electrode to specification:	Yes No N/A	Weld Procedures Followed:	Yes	No N/A
Qualified Welders:	Yes No N/A	Verified Joint Fit-up:	Yes	No N/A
Approved Drawings:	Yes No N/A	Approved WPS:	Yes	No N/A
		Delayed / Cancelled:	Yes	No N/A
Bridge No:	34-0006	Component:	OBG and SAS Tower Fabrication	

Summary of Items Observed:

On this date, Caltrans Office of Structural Material (OSM) Quality Assurance (QA) Inspector Joselito Lizardo was present as requested to perform observations on the fabrication of Orthotropic Box Girder (OBG) and SAS Tower at Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China.

The QA Inspector has randomly observed the following activities on sub-assembly Bays mentioned below;

Bay 3: OBG side/bottom/edge panel

This QA Inspector also randomly observed ZPMC welder operator Wei Dashuai ID Number 051246 and Xin Meng ID #202821 utilizing the FCAW Process in the 2F (Horizontal Fillet) Position with gantry(#1) mounted welding apparatus and ZPMC WPS WPS-B-T-2132-3, to weld 6-wt(W21x57) rib stiffener to side plate SP366-001-weld joints 015/016 and 021/022. The QA Inspector randomly observed ZPMC CWI Wu Ming Cai monitoring weld parameters.

The QA Inspector randomly observed ZPMC welder Liu Jin ID Number 202821, utilizing the FCAW Process with a 1.4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H in the 3G (Vertical Groove) Position with ZPMC WPS WPS-B-T-2233-B-U2-F, to weld fill pass on flange (w21X57) splice butt joint BP066-001-003/004. The QA Inspector randomly observed ZPMC CWI Wu Ming Cai monitoring weld parameters.

Bay 4: Tower Diaphragm

This QA observed ZPMC/NDE perform MT on the following side plates for OBG. This QA also perform 10% MT

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on these plates after finding it acceptable by ZPMC/NDE Cai Xin Xin. These plates were also green tagged after completing inspection/nde by all concerned parties.

- a) SP721-001-001~012
- b) SP614-001-043~054
- c) SP482-001-050~063
- d) SP482-001-001~014
- e) SP575-001-001~012

This QA observed ZPMC ground/chased transverse linear indication on bottom plate BP117-001-016 per critical welding repair report B-CWR183. This QA performed MT verification on the indication removal after finding it acceptable by ZPMC/NDE.

The QA Inspector randomly observed ZPMC welder ID Number 046830 and ID #053748 utilizing the SAW Process in the 1G (Flat Groove) Position with ZPMC WPS WPS-B-T-3221-B-U3c-S-1, to weld the fill pass on tower diaphragm plate splice butt joint SSD1-SA104A/B-3B/4B and ESD1-SA424A/B-10A/9A. The QA Inspector randomly observed ZPMC CWI Zhao Chen Sun monitoring weld parameters.

The QA Inspector randomly observed ZPMC Welders ID #068250, ID # 066326 and ID #066179 utilizing the Shielded Metal Arc Welding (SMAW) Process in the 3G (Vertical Groove) Position with Excalibur E9018M H4R, 4.8mm diameter electrode following ZPMC WPS WPS-B-T-3313-Tc-P5 to weld tower double diaphragm PJP fill pass on 40mm thick web plate to 60mm thick stiffener plate tee joint NSD1-SA261 weld joints 13, 15 and 16. The QA Inspector randomly observed ZPMC CWI Zhao Chen Sun monitoring weld parameters.

Bay 7: OBG - Floor Beam Sub Assembly

This QA Inspector randomly observed ZPMC welder Hong Shuili ID #044815 utilizing the FCAW Process in the 2G (Hor. Groove) Position with WPS-B-T-2232-Tc-U4b-F and a 1.4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H, semi automatic to weld fill pass on web plate to flange tee joint on floor beam FB009-011-045. The QA Inspector randomly observed ZPMC CWI Huang Wen Pang monitoring preheat and weld parameters.

FCAW(2F) fillet welding on flange to web plate floor beam FB016-017-weld joints 004, 022 and 023 utilizing the FCAW Process with a 1.4mm diameter electrode, filler metal brand E71T-1, class Supercored 71H.

Bay 8: Tower Diaphragm

Tack/fit-up of 40mm/60mm web plate/stiffener plate to (bottom) tower double diaphragm NSD1-SA311B/B continues using Excalibur E9018M H4R, 4.8mm diameter electrode was observed. Preheating with ceramic thermal blanket PJP weld joint on 40mm web plate to (bottom) tower double diaphragm WSD1-SA372B/B prior welding was also noted.

Bending of 60mm heavy steel plate marked P1520(E)-9/13(A) and P1532(E)-9/11(D) for tower diaphragm flange using natural gas with thermal heat input of <650 degree C with the aid of hydraulic ram following procedure HSR1(T)-4377 and HSR1(T)-4396 respectively this QA observed.

FCAW(2F) fillet welding on angular stiffener 5"X 31/2" to single tower diaphragm plate SSD1-SA126 weld joints

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2~100 this QA observed. ZPMC welders ID #045240 and ID #045203 were seen performing the task and ZPMC/CWI Lvliqing was noted monitoring the welding parameters.

Summary of Conversations:

No significant conversation occurred today.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Joshua Ishibashi, (858) 232-7081, who represents the Office of Structural Materials for your project.

Inspected By:	Lizardo, Joselito	Quality Assurance Inspector
Reviewed By:	Cuellar, Robert	QA Reviewer
